



Attorney's Docket No. 1030681-000521

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Won-bong Choi et al.

Application No.: 10/601,872

Filed: June 24, 2003

For: CARBON NANOTUBES FOR FUEL
CELLS, METHOD FOR
MANUFACTURING THE SAME, AND
FUEL CELL USING THE SAME

Group Art Unit: 1745

Examiner: DAH WEI D. YUAN

Confirmation No.: 1325

DECLARATION BY INVENTOR UNDER 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Chan-ho PAK, hereby state as follows:

1. I am a citizen of the Republic of Korea.
2. I am an inventor of the invention disclosed and claimed in the United States Patent Application No. 10/601,872, filed under 35 U.S.C. § 111 June 24, 2003, entitled "CARBON NANOTUBES FOR FUEL CELLS, METHOD FOR MANUFACTURING THE SAME, AND FUEL CELL USING THE SAME."
3. I conducted the experiment, which was described as Example 3 in the patent application, which includes the experimental conditions summarized in Table 1 below.

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Table 1

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Table 1

Step	Distributing metallic catalyst particles	Elevating reactor temperature	Synthesizing CNT			Dropping reactor temperature
Process	Pt particle distribution	Ar gas purging	Supplying acetylene	Supplying acetylene and hydrogen gas	Supplying acetylene	Ar gas purging
Temperature	—	Elevating a reactor temperature to 500°C	800°C	800°C	800°C	Dropping reactor temperature to room temperature
Time	—	—	10 minute	20 minute	30 minute	
			Total 60 minute			

4. Figure 4 is a pictograph of an exemplary branched carbon nanotube resulting from Example 3 as further explained above in Table 1.

5. Attached is a labeled copy of Figure 4 including labels indicating: (1) a branched carbon nanotube, (2) the main carbon nanotube, and (3) dispersed catalytic metal particles on the branched and main carbon nanotubes.

6. As a result of the experiment of Example 3 including the conditions of Table 1, branched carbon nanotubes similar to Figure 4 are formed.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 14 October 2006

Chan-ho PAK

Chan-ho PAK

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